

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:
Fernald et al.

Serial No.: 10/755,708

Confirmation No.: 9757

Filed: January 12, 2004

For: LARGE DIAMETER OPTICAL
WAVEGUIDE SPLICE

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Group Art Unit: 2883

Examiner: James P. Hughes

Customer No.: 36735

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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8/22/07
Date


Randol W. Read

Dear Sir:

REPLY BRIEF

Applicants submit this Reply Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2833.

Status of Claims

Claims 1-21 and 23-30 are pending in the application. Claims 1-30 were originally presented in the application. Claims 1-21 and 23-30 stand finally rejected as discussed below. The final rejections of claims 1-12, 21 and 23-30 are appealed.

Grounds of Rejection to be Reviewed on Appeal

1. Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Walters* (U.S. Pat. No. 6,033,515) in view of *Maas et al.* (U. S. Pat. No. 5,157,751, hereinafter, "*Maas*").

2. Claims 1-3, 6-7, 9, 12 and 23-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chapman et al.* (U.S. Pub. No. 2003/0223712, hereinafter, "*Chapman*") in view of *Maas*, in further view of *Walters*.

3. Claims 1, 4-5, 21 and 27-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chapman* in view of *Maas*, in further view of *Walters*, in further view of *Eskildsen et al.* (U.S. Pub. No. 2003/0108307, hereinafter, "*Eskildsen*").

4. Claims 1, 8, 10-11, 21, 26, and 29-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chapman* in view of *Maas*, in further view of *Walters*, in further view of *Huang et al.* (U.S. Pub. No. 2003/0117856, hereinafter, "*Huang*").

ARGUMENT

For conciseness, Applicants have not repeated the arguments previously presented in the Appeal Brief. Nevertheless, Applicants submit that all arguments in the Appeal Brief are applicable and incorporated herein. The following therefore is in reply to the Examiner's Answer.

First, the Examiner continues to only state that *Chapman et al.* teaches a method in which "the stages allow movement of the fibers relative to each other." However, claim 21 recites that "at least one of the first and second stages is movable to provide relative motion between the first and second optical waveguides while holding portions of the first and second optical waveguides." As explained in the Appeal Brief, the Examiner's statement regarding movement of fibers fails to disclose ability of the stages in *Chapman et al.* to move. Therefore, the reference fails to teach, show or suggest each and every element recited in claim 21 or any claims dependent thereon.

Further, Applicants submit that *Huang et al.* fails to qualify as prior art. *Huang et al.* was published on June 2, 2005, which is after the present application non-provisional filing date of January 12, 2004 much less the effective filing date of January 10, 2003 based on priority claimed to provisional applications that support the current claims. In addition, *Huang et al.* has a filing date based on a PCT filing of February 26, 2003, which is after the aforementioned effective filing date of the present application. Accordingly, *Huang et al.* is not prior art under 35 U.S.C. § 102 and cannot provide a basis for the present rejections.

Regarding the Examiner's statements that "cladding is not explicitly enabled or supported by the originally filed disclosure," Applicants have amended the text of the specification on June 14, 2006, to recite cladding. Support for this amendment is provided in the application incorporated by reference as previously discussed with the amendment. Further, Figures 3-5 of the present application show waveguides with cores (reference number 306) that are surrounded by a material (i.e., cladding since this is "so notoriously well known in the art" as concurred by the Examiner) visible in the figures.

Applicants reiterate that there is no indication in the references of splicing with regards to an optical waveguide having a diameter greater than 400 micrometers and a core surrounded by a cladding. The Examiner states that "Walters recognizes that a silica rod collimator- which would inherently have a core and distal end- may be fusion spliced." However, devices in *Walters* in which the fiber is fusion spliced lack any reference to having a particular structure in which a core is surrounded by a cladding even if hypothetically assumed to "inherently have a core." While fiber has the core and cladding relationship, it does not have a diameter greater than 400 micrometers.

The Examiner cannot simply state that it would be obvious to create a structure and employ that structure in *Walters* by some combination that lacks any basis or support in the prior art references. In particular, the fact that fibers have claddings does not automatically provide basis to introduce cladding with respect to the devices disclosed in *Walters* or otherwise provide motivation "to employ a cladding to increase the efficiency of light transmission within the fiber connection," as the Examiner states. If splicing in relation to the claimed structure with the diameter greater than 400 micrometers and the core surrounded by the cladding were as notorious as implied by the Examiner, then Applicants submit that evidence should be of record regarding this assumption. Rather, lack of any such evidence on record supports the non-obviousness of the claimed invention and makes the rejection improper.

CONCLUSION

The Examiner errs in finding that claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Walters* in view of *Maas*. The Examiner errs in finding that claims 1-3, 6-7, 9, 12 and 23-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chapman* in view of *Maas*, in further view of *Walters*. The Examiner errs in finding that claims 4-5, 21 and 27-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chapman* in view of *Maas*, in further view of *Walters*, in further view of *Eskildsen*. The Examiner errs in finding that claims 8, 10-11, 21, 26 and 29-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chapman* in view of *Maas*, in further view of *Walters*, in further view of *Huang*. Withdrawal of these rejections and allowance of all claims is respectfully requested.

Respectfully submitted,



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